

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number 09/997,347

Filing Date November 29, 2002

First Named Inventor Julia MacLachlan

Art Unit 1733

Examiner Name Jessica Rossi

Attorney Docket Number 1-15092

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Return Postcard
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Certified Copy of Priority Document(s)	Remarks	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	Brief on Appeal, Appendix and fees	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	MARSHALL & MELHORN, LLC.		
Signature			
Printed name	Donald A. Schurr		
Date	11-4-05	Reg. No.	434,247

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Roberta A. Winzeler	Date	11-04-05

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on: November 4, 2005

Roberta A. Winzler

Name

Roberta A. Winzler

Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:
Julia MacLachlan

Serial No: 09/997,347

Filed: November 29, 2002

For: METHOD OF USING SHORT
WAVELENGTH UV LIGHT TO
SELECTIVELY REMOVE A
COATING FROM A SUBSTRATE)
AND ARTICLE PRODUCED
THEREBY

) Group Art Unit: 1733
)
)

) Examiner: Jessica Rossi
)
)

) Attorney Docket No: 1-15092
)
)

MAIL STOP APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

11/09/2005 DTESSEM1 00000099 09997347

01 FC:1402

500.00 OP

Void date: 11/09/2005 DTESSEM1
11/09/2005 DTESSEM1 00000005 09997347
01 FC:1401

500.00 OP

BRIEF ON APPEAL

Honorable Sir:

This brief is in furtherance of the Notice of Appeal, which was timely filed in connection with the above-captioned application on August 1, 2005, the Notice of

11/09/2005 DTESSEM1 00000005 09997347

01 FC:1401

500.00 OP

Appeal being received in the PTO on August 4, 2005. This Brief is being filed under the provisions of 37 CFR §41.37 and its related requirements.

A separate Petition for Extension of Time Under 37 CFR §1.136(a) is included herewith. The fees required under 37 CFR 1.17(F) are also being submitted herewith.

1. Real Party in Interest

The real party in interest in Pilkington North America, Inc. The assignment to Pilkington North America, Inc. was recorded on November 29, 2001, at reel 012345, frame 0075.

2. Related Appeals and Interferences

There is no known appeal or interference which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in this Appeal.

3. Status of Claims

On August 1, 2005, applicant submitted a Notice of Appeal in connection with the subject application, appealing the final rejection of claims 23-38.

The status of each of the claims is as follows:

1. Claims cancelled: 1-22;
2. Claims withdrawn from consideration but not cancelled: None;
3. Claims pending: 23-38;
4. Claims allowed: None;
5. Claims rejected: 23-38.

The claims on appeal are 23-38. A copy of the claims on file is submitted in the attached Claims Appendix.

4. Status of Amendments

No amendment was filed subsequent to the final rejection of the application by the Office Action of July 18, 2005.

5. Summary of Claimed Subject Matter

The present invention, as defined by independent claims 23, defines a method of adhering an item 24 to an area 20 of an exterior surface 12 of the exterior of a vehicle glazing on which a hydrophobic coating has previously been disposed. In order to securely adhere the item 24, e.g., an item of hardware, to the surface 12 of the glass sheet or panel comprising the exterior surface 12 of vehicle glazing, the hydrophobic coating must be selectively removed. Precise removal of the hydrophobic coating is accomplished by irradiating the selected area with short wavelength UV radiation having a dominant wavelength in the range of 100 nm to 200 nm.

The item may then be adhered to the area 20 of the exterior surface 12 of glass sheet or panel from which the hydrophobic coating has been removed by a suitable method.

The invention as defined in claim 23 is best illustrated in Fig. 1, showing the coated glass (10,12) being exposed to the short wavelength UV light, the UV radiation emanating from a device 14, preferably an excimer lamp. Fig. 2 shows the coated glass (10,12) after exposure to the short wavelength UV light, so that area 20 is substantially

free of the hydrophobic coating 12. Fig. 3 shows an item of hardware 24 adhered by a suitable adhesive 22 to the area 20 from which the hydrophobic coating was removed. Figs. 4 and 5 show the water contact angle 26 of a water droplet relative to the surface of the glass sheet before (Fig. 4) and after (Fig. 5) the removal of the hydrophobic coating.

Support for the present invention as defined in claim 23, can be found throughout the specification of the subject application, but in particular page 2, paragraphs 4 and 5 (Summary of the Invention). The Detailed Description of the Invention, beginning at page 3, through page 5, paragraph 3, further describes the invention.

6. Grounds for Rejection to be Reviewed on Appeal.

On July 18, 2005, the Examiner issued a second Office Action in connection with the RCE application filed by applicant on October 18, 2004. This Office Action was made final. While the Examiner did withdraw several rejections in light of applicant's Amendment of May 9, 2005, the Examiner, nonetheless, maintained a significant number of rejections of all of the pending claims, namely, claims 23-38.

a) Claims 23-24 and 26-33 were rejected under 35 USC 103(a) as being unpatentable over JP 2001-146439 to Yoshinori et al., in view of U.S. Patent No. 4,543,283 to Curtze et al. and U.S. Patent No. 5,556,667 to Teranishi et al.

b) Claim 25 was rejected under 35 USC 103(a) as being unpatentable over JP 2001-146439 to Yoshinori et al., U.S. Patent No. 4,543,283 to Curtze et al. and U.S. Patent No. 5,556,667 to Teranishi et al., and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

c) Claims 34-35 and 37-38 were rejected under 35 USC 103(a) as being unpatentable over JP 2001-146439 to Yoshinori et al., U.S. Patent No. 4,543,283 to Curtze et al. and U.S. Patent No. 5,556, 667 to Teranishi et al., and further in view of the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al. and U.S. Patent No. 4,931,125 to Volkmann et al.

d) Claim 36 was rejected under 35 USC 103(a) as being unpatentable over JP 2001-146439 to Yoshinori et al., U.S. Patent No. 4,543,283 to Curtze et al., U.S. Patent No. 5,556,667 to Teranishi et al. and the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al. and U.S. Patent No. 4,931,125 to Volkmann et al., and further in view of U.S. Patent No. 5,673,892 to Kizaki et al.

e) Claims 23-24 and 26-33 were rejected under 35 USC 103(a) as being unpatentable over the prior art referred to in U.S. Patent No. 5,556,667 to Teranishi et al., in view of U.S. Patent No. 4,543,283 to Curtze et al. and JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Van Der Putten et al.

f) Claim 25 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,556,667 to Teranishi et al., U.S. Patent No. 4,543,283 to Curtze et al., and JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al.

g) Claims 34-35 and 37-38 were rejected under 35 USC 102(a) as being unpatentable over U.S. Patent No. 5,556,667 to Teranishi et al., U.S. Patent No. 4,543,283 to Curtze et al. and JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 and further in view of the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No. 4,931,125 to Volkmann et al.

h) Claim 36 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,556,667 to Teranishi et al., U.S. Patent No. 4,543,283 to Curtze et al., JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al., and the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No. 4,931,125 to Volkmann et al., and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

i) Claims 23-24 and 26-33 were rejected under 35 USC 103(a) as being unpatentable over FR 2793889 to Anderson, in view of U.S. Patent No. 4,543,283 to Curtze et al. and also in view of JP 2001-146439 to Yoshinori et al. and/or U.S. Patent No. 6,316,059 to Vander Putten et al.

j) Claim 25 was rejected under 35 USC 103(a) as being unpatentable over FR 2793889 to Anderson, U.S. Patent No. 4,543,283 to Curtze et al. and JP 2001-146439 to Yoshinori et al. and/or U.S. Patent no. 6,316,059 to Vander Putten et al. and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

k) Claim 34-35 and 37-38 were rejected under 35 USC 103(a) as being unpatentable over FR 2793889, U.S. Patent No. 4,543,283 to Curtze et al. and JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al., and further in view of the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No. 4,931,125 to Volkmann et al.

l) Claim 36 was rejected under 35 USC 103(a) as being unpatentable over FR 2793889 to Anderson, U.S. Patent no. 4,543,283, JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al., and the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No.

4,931,125 to Volkmann et al., and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

m) Claims 23-24 and 26-33 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 4,983,459 to Franz et al. et al., in view of U.S. Patent No. 4,543,283 to Curtze et al., and also in view of JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al.

n) Claim 25 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 4,983,459 to Franz et al. et al., U.S. Patent No. 4,543,283 to Curtze et al. et al., and JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al. and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

o) Claims 34-35 and 37-38 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 4,983,459 to Franz et al., U.S. Patent No. 4,543,283 to Curtze et al., JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al., and further in view of the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No. 4,931,125 to Volkmann et al.

p) Claim 36 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 4,983,459 to Franz et al., U.S. Patent No. 4,543,283 to Curtze et al., JP 2001-146439 to Yoshinori et al., and/or 6,316,059 to Vander Putten et al., and the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No. 4,931,125 to Volkmann et al., and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

q) Claim 25 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,556,667 to Teranishi et al., U.S. Patent No. 4,543,283 to Curtze et al. and JP 2001-146439 to Yoshinori et al. and/or U.S. Patent No. 6,316,059 to Vander Putten et al. and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

r) Claims 34-35 and 37-38 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,556,667 to Teranishi et al., U.S. Patent No. 4,543,283 to Curtze et al. and JP 2001-146439 to Yoshinori and/or U.S. Patent No. 6,316,059 to Vander Putten and further in view of the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al. and U.S. Patent No. 4,931,125 to Volkmann et al.

s) Claim 36 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 5,556,667 to Teranishi et al., U.S. Patent No. 4,543,283 to Curtze et al., JP 2001-146439 to Yoshinori et al. and/or U.S. Patent No. 6,316,059 to Vander Putten et al. and the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al. and U.S. Patent No. 4,931,125 to Volkmann et al.

t) Claim 36 was rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 4,983,459 to Franz et al., U.S. Patent No. 4,543,283 to Curtze et al., JP 2001-146439 to Yoshinori et al., and/or U.S. Patent No. 6,316,059 to Vander Putten et al., and the collective teachings of U.S. Patent No. 5,131,967 to Tweadey et al., and U.S. Patent No. 4,931,125 to Volkmann et al., and further in view of U.S. Patent No. 5,763,892 to Kizaki et al.

7. Argument.

In view of the numerous grounds of rejection, and in order to facilitate the Board's review of applicant's arguments relative to the cited references, applicant provides the following brief summary of same:

JP 2001-146439 to Yoshinori et al., is believed to describe a method of partially removing a functional coating. Part of the coating is protected to avoid its exposure to UV light. The portion of the coating which is exposed to the UV light is broken down to generate ozone which is utilized in a later film removal step.

U.S. Patent No. 4,543,283 to Curtze et al. describes a glazing unit comprising a glass substrate and a laceration inhibiting shield supported by and extending over what would otherwise be an exposed interior surface of the substrate. A gasket or frame member composed of a synthetic polymer extends around a major portion of the periphery of the glass substrate and laceration shield, and is adhered to the marginal edge surfaces of each, the gasket having been polymerized in situ adjacent such periphery, and having assumed, through the autogenous mechanism incident to its polymerization and cure, intimate contact with the portions to which it is adhered.

U.S. Patent No. 5,556,667 to Teranishi discloses a method of forming a water-resistant film on a transparent panel such as an automobile window glass panel by applying a coating solution to a surface of the transparent panel, applying a solvent to a surface of a region not to be coated in partly overlapping relation (boundary region) to the coating solution applied to the region to be coated, drying the applied coating solution and solvent, and thereafter baking the coating solution into a water-resistant film.

U.S. Patent No. 6,316,059 to VanderPutten et al., describes a method of providing a metal pattern on a glass substrate in an electroless process without using photo-resist layers and organic solvents. As part of the electroless process a silane layer is removed by irradiation with actinic radiation by an ArF excimer laser, an oxygen plasma, or preferably a UV ozone treatment. The method also requires use of a palladium (Pd) sol, as Pd particles stabilized with water-soluble polymers do not absorb on glass surfaces.

FR 2793889 To Anderson et al., describes a transparent substrate having anti-reflective coatings on at least one surface formed from thin dielectric layers with alternating high and low refractive indices. At least one layer with a high refractive index includes modified titanium dioxide to decrease the refractive index to 2.40 or lower.

U.S. Patent No. 4,983,459 to Franz et al., describes a method, and the article made by such method, wherein a glass substrate is provided with a durable non-wetting surface by treatment with a perfluoroalkyl alkyl silane and a fluorinated olefin telomer.

U.S. Patent No. 5,763,892 to Kizaki et al., describes utilizing a dielectric barrier discharge excimer lamp for emitting UV light for a predetermined time period in order to supply a prescribed amount of ultraviolet energy to a substrate. The on/off time of the barrier discharge excimer lamp is controlled so as to maintain UV energy emissions at a constant level, and to avoid excessive temperature rise in the interior of an irradiator. Lamp output can be stabilized quickly by this method of operation whereby the time for different treatment steps is reduced.

U.S. Patent No. 5,131,967 to Tweadey et al., describes a method of making a laminated glazing unit having a metal coating on a laminated ply, and then removing a peripheral portion of the metal coating by exposure to a laser beam. Such edge deletion of the metal coating allows the subsequent lamination process to be carried out and the edges of the laminated unit to be well sealed, so that it is environmentally durable, and minimizes degradation of the integrity of the unit due to progressive edge corrosion of the metal coating which might otherwise occur.

U.S. Patent No. 4,931,125 to Volkmann et al., describes a method for adhesively bonding a first body to a second body, the first body comprising a non-metallic substrate and a filler, the second body comprising a substrate, metallic or non-metallic. The first body or the filler is pretreated by exposure to an energy beam to form projections on the non-metallic substrate by evaporation of the substrate material or the filler. The second body can be untreated, pretreated by an energy beam, or pretreated in another manner. An adhesive can then be applied to the pretreated area, and the first body adhered to the second, the bond created said to be stronger due to the projections formed on the first and/or second body by pretreatment.

Summary of Applicant's Position

The Examiner has rejected one or more of claims 23-38 under at least 16 combinations of references. In no instance has the Examiner relied on combining less than 3 references as a basis for rejecting such claims. More often, 4-6 references are combined to support those rejections. Applicant respectfully submits that the Examiner has resorted to hindsight in her detailed analysis of the present application. The need

to combine three, four, five, or even six references to reject applicant's claims clearly indicates as much.

First, applicant would draw attention to page 1, paragraph 2, of the specification, which discusses the safety benefits of hydrophobic coatings on a vehicle window when contacted by water. Applicant submits that, logically, the only way such a benefit could accrue is for the hydrophobic coating to be on the surface of the window "exposed to the exterior of the vehicle," where it is contacted by rainfall, road spray, snow and the like, and is quickly shed by the hydrophobic coating to improve the driver's vision through such window. Also, please see the attached July 1997 report on hydrophobic coatings prepared by the University of Michigan Transportation Research Institute.

Secondly, applicant believes it is clear that the Curtze et al., reference is directed to a structure intended to be placed on the surface of a vehicle window exposed to the interior of a vehicle, i.e., the passenger compartment. Applicant is particularly familiar with the Curtze et al. reference, as Libbey-Owens-Ford Company is now known as Pilkington North America, Inc., the assignee in the present application. The interior location is necessary for the invention of the Curtze et al. reference to fulfill its function as an anti-laceration, anti-ejection shield. The coating noted by the Examiner as having the composition of a hydrophobic coating is present, applicant submits, as an anti-abrasion coating to minimize scratching of the interior surface during cleaning rather than for any purpose related to possible hydrophobic properties.

One skilled in the art would further recognize that a structure such as is disclosed in the Curtze et al. reference would not be durable enough to withstand the abrasive

effects of windshield wipers, snow scrapers and the like to which a structure on an exterior surface would be exposed.

With regard to the Tweadey et al. reference, one skilled in the art would recognize that the purpose of the invention of the Tweadey et al. reference is to provide “a reliable effective and efficient method of improving the environmental durability of laminated glazing units having metal-based transparent, electrically conductive film stacks for solar load reduction and/or electrical heating in view of their potential for edge corrosion resulting from prolonged exposure to certain environmental conditions.” (Tweadey, col. 3, lines 43-49) (emphasis added).

One skilled in the art would understand that hydrophobic coatings are not metal-based, and are therefore not susceptible to corrosion upon exposure to “certain environmental conditions.” To the contrary, hydrophobic coatings are intended to be exposed to the environment, and must be, in order to fulfill their water-shedding purpose. Therefore, one skilled in the art would not be motivated to use the disclosure of Tweadey et al. to remove non-metal based, non-corrosive coatings from a glass substrate.

With respect to Volkmann et al., Kizaki et al., Van Der Putten et al., Anderson, Yoshinori et al., Franz et al. and Teranishi et al., and combinations thereof, applicant notes that claims 23-38 recite irradiating hydrophobic coatings on an area of a surface of a vehicle glazing (see, page 2, line 23 to page 3, line 2) with UV radiation preferably having a dominant wavelength in the range of 100-200 nm (see, for example, page 2, lines 21-22), thus removing the coatings. The hydrophobic coatings referred to herein cause water which comes into contact with the coating on an exterior surface of a

vehicle glazing to bead readily and run off quickly so as not to obscure the outward vision of the occupants of the vehicle (see Background; page 1, lines 10-18).

After carefully studying the cited references, the applicant can find nowhere in one or proper combinations of such cited references where at least the above-stated limitations (irradiating hydrophobic coatings on an exterior surface of a vehicle glazing with radiation in the range of 100-200 nm), then adhering an item to an area of an exterior surface of a vehicle glazing (claims 23-33) or utilizing electro-mechanical means to provide relative movement between a source of UV radiation and a hydrophobic coating (claims 34-38) are taught or suggested.

Therefore, applicant respectfully submits that claims 23-38 of the present application are patentable over the cited references as the inventions defined thereby are not suggested therein, nor is there any suggestion or motivation to modify or combine these references' teachings in order to teach or suggest the claimed limitations, as required by 35 USC §103. Consequently, the applicant respectfully submits that claims 23-38 of the present application are patentable over such cited references and that claims 23-38 of the present application are patentable over such cited references and that claims 23-38 should be allowed thereover.

Specific Grounds for Rejection

a) The Examiner has rejected claims 23-24, and 26-33 under 35 USC §103(a) as being unpatentable over Yoshinori et al., in view of Curtze et al. and Teranishi et al. The Yoshinori, et al. reference, based on the small amount of which is available in the English language, is believed to disclose a method of partially removing

a functional coating. Part of the area of the substrate coated is protected to avoid exposure to UV light. The portion of the coating which is exposed to UV light is broken down to generate ozone, which ozone is utilized in a later film removal step.

Applicant notes that one of the advantages of the method of the present invention is that no masking or other protective method is required, due to the precision with which the short wavelength UV light may be directed onto the coated substrate from the excimer lamp. Applicant further notes that ozone generation is not part of the method of the present invention which is necessary or desirable therefor.

As described previously, applicant submits that the Curtze et al reference is directed to an anti-laceration, anti-ejection shield comprising a sheet of polymeric material applied in a specific manner on the surface of a vehicle window exposed to the interior of a vehicle.

By contrast, the hydrophobic coating removed by the method of the present invention is provided on the exterior surface of a vehicle window, so the hydrophobic coating can serve its intended purpose of causing water, in whatever physical form, to be more efficiently shed of the vehicle window, either by wind action, or by mechanical means, such as windshield wipers.

Accordingly, applicant submits that one skilled in the art would not be motivated to combine the Yoshinori and Curtze references to arrive at the present invention, nor would the present invention be achieved if they were combined.

The Examiner has further cited the Teranishi et al. reference which describes a method of forming a variable-thickness water-repellent coating on a glass substrate, the variable thickness occurring in a so-called boundary region, and leaving an uncoated

region, as well. Applicant notes that this references makes no mention of removing the coating, or using UV light to do so. Applicant respectfully submits that one skilled in the art would not be motivated to combine Teranishi with Yoshinori and Curtze to achieve a method of removing a hydrophobic coating using an excimer lamp for at least the reasons discussed herein. Therefore, claims 23-24 and 26-33 are believed to be patentable over the cited references.

b) For at least the reason that claim 25 depends from patentable claim 23, applicant submits that claim 25 is likewise patentable.

c) For at least the reason that claims 34-35 and 37-38 depend directly or indirectly from patentable claim 23, applicant submits that claims 34-35 and 37-38 are likewise patentable.

d) For at least the reason that claim 36 depends indirectly from patentable claim 23, applicant submits that claim 36 is likewise patentable.

e) The Examiner has rejected claims 23-34 and 26-33 under 35 USC §103(a) as being unpatentable over Teranishi in view of Curtze and Yoshinori and/or Vander Putten. For at least the reasons discussed above, applicant submits that one skilled in the art would not be motivated to combine Teranishi, Curtze and Yoshinori to achieve the invention of the present application, nor would the present invention be achieved if they were combined.

The additional reference, Vander Putten et al., describes a method of providing a metal pattern on a glass substrate by an electroless process which is said not to require photo-resist layers and organic solvents. As part of the process, a silane layer is removed by irradiation with actinic radiation, the source of which radiation may be an

ArF excimer laser, an oxygen plasma, or preferably a UV ozone treatment. The method also requires use of a palladium (Pd) sol, as Pd particles stabilized with water-soluble polymers do not absorb on glass surfaces. The method is said to be particularly suitable for the manufacture of the black matrix on a passive plate for an LCD, or on panels of other flat color displays, such as flat cathode ray tubes.

First, Vander Putten et al. fails to supply any of the above-noted deficiencies of Teranishi, Curtze and Yoshinori.

Moreover, one skilled in the art would recognize that an excimer laser, as described in Vander Putten et al., is significantly different from an excimer lamp, in that the intensity of the light emitted is much greater with the laser than with the excimer lamp. Thus, the mechanism by which the laser works is likewise different than with the excimer lamp. In the case of the present invention, it is likely that with the high temperatures generated by the intensity of the laser light, the coating would be simply burned off, whereas, with the excimer lamp, the temperatures generated are much lower and the excimer lamp desirably relies on selectively breaking chemical bonds, rather than simply destroying the coating altogether. Applicant submits that one skilled in the art would thus not be motivated to choose a laser for the purpose of the present invention, nor would an excimer lamp be appropriate for many purposes for which a laser might be used. Applicant notes that excimer lasers are also much more expensive than excimer lamps, and so would limit the feasibility of using a laser in a production process as is envisioned with the method of the present invention.

For all these reasons, applicant submits that the addition of Vander Putten to the Teranishi, Curtze and Yoshinori reference does not overcome the deficiency left by

Teranishi, Curtze and Yoshinori to achieve the invention of the present application, nor would one skilled in the art be motivated to make such a combination.

Therefore, applicant respectfully submits that claims 23-24 and 26-33 are patentable over the cited reference, singly or in combination.

f) For at least the reason that claim 25 depends from patentable claim 23, applicant submits that claim 25 is likewise patentable.

g) For at least the reason that claims 34-35 and 37-38 depend directly or indirectly from patentable claim 23, applicant submits that claims 34-35 and 37-38 are likewise patentable.

h) For at least the reason that claim 36 depends indirectly from patentable claim 23, applicant submits that claim 36 is likewise patentable.

i) The Examiner has rejected claims 23-24 and 26-33 under 35 USC §103(a) as being unpatentable over Anderson et al. in view of Curtze et al. and Yoshinori et al and/or Vander Putten et al.

For reasons previously noted, application submits that claims 23-24 and 26-33 are patentable over the Curtze et al, Yoshinori et al. and Vander Putten et al. references, singly, or in combination.

The additional reference, Anderson et al., describes a substrate having a multi-layer film stack deposited thereon, such that the thin layer coatings are of alternating high and low refractive indices. In this configuration, the film stack exhibits anti-reflective properties. At least one high refractive index layer includes modified titanium dioxide to decrease the refractive index somewhat. Other coating stacks described may exhibit properties such as hydrophobicity.

Applicant submits, however, that the description of Anderson et al. adds nothing to the combination of references cited to allow it to achieve the invention of the present application. The reference makes no mention of removing the coating described, or using UV light to do so.

Accordingly, applicant submits that claims 23-24 and 26-33 are patentable over Anderson et al., in view of Curtze et al. and Yoshinori et al. and/or Vander Putten et al.

j) For at least the reason that claim 25 depends from patentable claim 23, applicant submits that claim 25 is likewise patentable.

k) For at least the reason that claims 34-35 and 37-38 depend directly or indirectly from patentable claim 23, applicant submits that claims 34-35 and 37-38 are likewise patentable.

l) For at least the reason that claim 36 depends indirectly from patentable claim 23, applicant submits that claim 36 is likewise patentable.

m) The Examiner has rejected claims 23-24 and 26-33 under 35 USC §103(a) as being unpatentable over Franz et al, in view of Curtze et al., and Yoshinori et al. and/or Vander Putten, et al.

For the reasons previously discussed, applicant submits that claims 23-24 and 26-33 are patentable over Curtze et al., Yoshinori et al., and/or Vander Putten, et al., either singly, or in combination.

With regard to the additional reference, Franz et al., a method for making a durable non-wetting surface and the article made thereby, is described. Such coating is a perfluoroalkyl alkyl silane and a fluorinated olefin telomer. The coated glass is said to exhibit a high water contact angle. Applicant can see no way that one skilled in the art

could utilize the information contained in Franz et al. to overcome the deficiencies of Curtze et al., Yoshinori et al. and/or Vander Putten et al. to achieve the invention of the subject application, as it makes no mention of removing the coating described, nor using UV light to do so.

Therefore, applicant respectfully submits that claims 23-24 and 26-33 are patentable over Franz et al., Curtze et al, Yoshinori et al., and/or Vander Putten et al., singly, or in combination.

n) For at least the reason that claim 25 depends from patentable claim 23, applicant submits that claim 25 is likewise patentable.

o) For at least the reason that claims 34-35 and 37-38 depend directly or indirectly from patentable claim 23, applicant submits that claims 34-35 and 37-38 are likewise patentable.

p) For at least the reason that claim 36 depends indirectly from patentable claim 23, applicant submits that claim 36 is likewise patentable.

q) For at least the reason that claim 25 depends from patentable claim 23, applicant submits that claim 25 is likewise patentable.

r) For at least the reason that claims 34-35 and 37-38 depend directly or indirectly from patentable claim 23, applicant submits that claims 34-35 and 37-38 are likewise patentable.

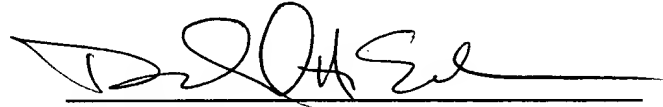
s) For at least the reason that claim 36 depends indirectly from patentable claim 23, applicant submits that claim 36 is likewise patentable.

t) For at least the reason that claim 36 depends indirectly from patentable claim 23, applicant submits that claim 36 is likewise patentable.

CONCLUSION

As claims 23-24 and 26-33 are patentable for the reasons discussed, and as claims 25 and 34-38 depend directly or indirectly from independent claim 23, applicant submits claims 25 and 34-38 are likewise patentable. An expeditious determination by the Board to that effect is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. A. Schurr', is written over a horizontal line.

Donald A. Schurr
Registration No. 34,247

Attorneys:
MARSHALL & MELHORN, LLC.
Four SeaGate, 8th Floor
Toledo, OH 43604
419-249-7145
419-249-7151 – Fax



CLAIMS APPENDIX

23. A method of adhering an item to an area of a surface of a vehicle glazing comprising:

providing a vehicle glazing having an exterior surface exposed to the exterior of a vehicle, the exterior surface having a hydrophobic coating disposed thereon;

irradiating the hydrophobic coating on the area of the exterior surface of the vehicle glazing with UV radiation having a dominant wavelength in the range of 100 to 200 nm, thus substantially removing the hydrophobic coating disposed on the area of the exterior surface of the vehicle glazing; and

adhering the item to the area of the exterior surface of the vehicle glazing.

24. The method of claim 23, wherein the hydrophobic coating is chosen from a group consisting of polysiloxane, polyfluorosiloxane, and diamond-like carbon.

25. The method of claim 23, wherein the dominant wavelength is approximately 172 nm.

26. The method of claim 23, wherein a water contact angle that is greater than 100 degrees is realized on the area of the surface of the vehicle glazing prior to irradiating the area of the surface of the vehicle glazing for 5-120 seconds or less, and a

water contact of the vehicle glazing following the irradiating of the area of the surface of the vehicle glazing.

27. The method of claim 23, further comprising:
applying an adhesive promoting primer to the area of the surface of the vehicle glazing from which the hydrophobic coating has been removed; and
applying an adhesive to the area of the surface of the vehicle glazing from which the hydrophobic coating has been removed.

28. The method of claim 27, wherein the adhesive promoting primer comprises silane and the adhesive is chosen from a group consisting of a cyanoacrylate, urethane, epoxy, acrylic, hot melt silicone, and pressure sensitive adhesive.

29. The method of claim 23, wherein the item comprises an elastomeric member.

30. The method of claim 29, wherein the elastomeric member comprises a gasket.

31. The method of claim 23, wherein the item comprises a vehicular hardware device.

32. The method of claim 31, wherein the vehicular hardware device comprises a fastening device.

33. The method of claim 31, wherein the vehicular hardware device comprises a mounting device.

34. The method of claim 23, for selectively removing a hydrophobic coating comprising:

providing a surface being exposed to the exterior of the vehicle;

providing a source of UV radiation having a dominant wavelength in the range of 100 to 200 nm;

utilizing electro-mechanical means to provide relative movement between a source of UV radiation and the hydrophobic coating to irradiate the area of the surface of the hydrophobic coating, thus selectively removing the hydrophobic coating and adhering an item to the area from which the hydrophobic coating has been removed.

35. The method of claim 34, wherein the hydrophobic coating is chosen from a group consisting of polysiloxane, polyfluorosiloxane, and diamond-like carbon.

36. The method of claim 34, wherein the dominant wavelength is approximately 172 nm.

37. The method of claim 34, wherein the electro-mechanical means comprises a robot arm.

38. The method of claim 37 wherein the electro-mechanical means further comprises a vision system in communication with the robot arm.